

**REMARKS**

Claims 1-20 are pending in this application. By this Amendment, claims 1-9 and 14-16 are amended. The amendments to claims 1, 5, 8 and 16 are supported in the application as originally filed in at least paragraphs [0044], and [0048]-[0050]. The amendments to claims 5 and 8 are further supported in paragraphs [0061]-[0063]; and Figs. 4 and 5. The additional claim amendments are made for purposes of form. No new matter is added. In view of at least the following remarks, reconsideration and allowance are respectfully requested.

The Office Action objects to the drawings, specification and claims as containing various informalities. The objections are believed obviated by the above amendments.

For example, the objections to the drawings should be withdrawn because the specification has been amended to recite reference numeral "7" instead of reference numeral "12".

The objections to the specification and claims are also believed obviated by the above amendments. However, the Office Action objects to paragraph [0046] as being unclear as to how pulse signals are sent to the automatic gain control section. Applicant submits that paragraphs [0044] and [0045] in the pending application clarify that the band pass filter 22 passes signals having frequencies ranging from about 7Hz to 30Hz and attenuates signals in other frequency bandwidths. See, e.g., paragraph [0044] at lines 8-10. Accordingly, paragraph [0046] is believed to be sufficiently clear in view of the preceding paragraphs.

Accordingly, reconsideration and withdrawal of the objections are respectfully requested.

Claims 1-20 are rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. This rejection is respectfully traversed.

The Office Action rejects the claims under §101 reasoning that either there is no physical transformation and/or no tangible result. The pending claims are clearly directed to statutory subject matter. For example, claim 1 relates to a biosignal intensity processing method where the method includes, *inter alia*, "subjecting amplified biosignals to an automatic gain control (AGC) means which controls gains such the amplified biosignals are processed to have sizes in a prescribed range." Independent claims 5, 8 and 16 recite methods or devices performing similar features. Accordingly, the claimed subject matter produces a useful, concrete and tangible result, and therefore complies with §101. Additionally, contrary to assertions in the Office Action, the methods and devices have been disclosed for practical applications and in any event, are not directed to "abstract" applications. See, e.g., MPEP §2106(IV)(C)(2)(2)(b). For example, the application discloses that the claimed subject matter has utility with respect to determining whether or not a person is in bed. See, e.g., pending application at paragraphs [0002]-[0006] and [0012]. Accordingly, reconsideration and withdrawal of the §101 rejection is respectfully requested.

Claims 1-7, 16 and 17 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,479,939 to Ogino ("Ogino") in view of Japanese Patent No. 2003-052010 to Ohashi ("Ohashi"); claims 8-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ogino in view of Ohashi and in further view of Japanese Patent No. 8-131407 to Yamauchi et al. ("Yamauchi"); claim 13 is rejected under 35 U.S.C. §103(a) as being unpatentable over Ogino in view of Ohashi and Yamauchi and in further view of Japanese Patent No. 2002-058653 to Nemoto ("Nemoto"); claim 18 is rejected under 35 U.S.C. §103(a) as being unpatentable over Ogino in view of Ohashi and in further view of Yamauchi; and claims 19 and 20 are rejected under 35 U.S.C. §103(a) as being unpatentable over Ogino in view of Ohashi and in further view of Nemoto. These rejections are respectfully traversed.

The applied references do not support a *prima facie* case of obviousness because they fail to teach or suggest, "calculating a biosignal intensity value by applying a controlled gain to a function that inversely relates the controlled gain with the biosignal intensity," as recited in claim 1. The Office Action cites Ohashi as disclosing the use of gain control in a sleep condition monitoring device. See Office Action at page 6. As stated in the Office Action, "[m]odifying the invention of Ogino to provide gain control means would have been obvious to one of ordinary skill in the art as a means of adjusting the level of the signals to a predetermined detection range in order to distinguish the signals from background noises." However, even if Ohashi is combined as suggested by the Examiner, the combination fails to suggest the claimed subject matter because neither Ohashi nor Ogino suggests to use the gain to calculate a biosignal intensity value. As stated in paragraph [0022] of Ohashi, the gain control is used to change output signals into a predetermined level, however, the gain value is not used to calculate any biosignal intensity value, for example, a biosignal intensity value that may be compared to a predetermined threshold value. Additionally, as acknowledged in the Office Action, Ogino does not teach to employ a gain control means, and therefore does not suggest to calculate biosignal intensity values based on the gain control. Thus, for at least this reason, claim 1 is patentable over the applied references.

Independent claim 16 relates to a patient status sensing device where an output of a signal amplifying/shaping section is processed in a gain control section by "controlling gain so that the output of the signal amplifying/shaping section is processed into signals within a prescribed range" where a status judgment section determines patient status based, in part, on the controlled gain. Similar to above, the alleged combination of Ogino and Ohashi does not teach to consider the gain in determining patient status. Thus, for these reasons, claims 1 and 16 are patentable over the applied references.

Claims 2-4 and 17-20 depend from one of independent claims 1 and 16 and therefore are also patentable over the applied references for at least the reasons enumerated above, as well as for the additional features they recite.

Independent claim 5 recites a step of judging whether a subject is in bed, where the method can determine whether the subject is in a normal condition or an abnormal condition, for example, where a subject may be in bed but a sensor is not functioning properly. These features are also not suggested by the combination of Ogino and Ohashi. For example, none of the applied references teaches to compare a biosignal intensity value to at least two predetermined intensity values, as embodied in claim 5. Additionally, the applied references do not suggest any step for judging whether the subject is in an abnormal condition.

Claim 8 is directed to a bedding state monitoring device including features similar to those referred to in claim 5. Regarding claim 8, the Office Action rejects the claim in further view of Yamauchi, alleging that Yamauchi discloses multiple sensors. However, Yamauchi also does not suggest to compare biosignal intensity values to at least two predetermined intensity values, in order to determine a bedding state of a subject. Additionally, independent claims 5 and 8 recite features similar to those referred to in claim 1, i.e., using the gain to calculate a biosignal intensity value. Thus, for at least these reasons, claims 5 and 8 are patentable over the applied references.

Claims 6, 7 and 9-15 depend from at least one of independent claims 5 and 8 and therefore are also patentable over the applied references for at least the reasons enumerated above, as well as for the additional features they recite.

In view of at least the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-20 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Date: June 13, 2007

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